California Regional Water Quality Control Board

San Francisco Bay Region

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Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

Date: FEB 0 8 2007
File No.: 1250.34(BT)

Dragomir Bogdanic
California Department of Transportation
PO Box 23660
Oakland, CA 94623-0660

SUBJECT: California Department of Transportation asphalt-concrete and Portland Cement Concrete grindings reuse guidance

Dear Mr. Bogdanic:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff (Brendan Thompson, Alec Naugle, Keith Lichten) met with California Department of Transportation (Department) staff (Dragomir Bogdanic, Jill Pollock) on December 27, 2006, to discuss the reuse of Asphalt-Concrete (AC) grindings by Caltrans with respect to the regulatory requirements of the Water Board. Please note that our policy towards the reuse of Portland Cement Concrete (PCC) grindings do not differ from AC grindings reuse requirements.

The Department has presented three potential situations where AC grindings may be reused: 1) As a roadway subbase; 2) As backfill material (e.g., soundwall foundations, shoulder backing); and, 3) Compacted surface in a maintenance/work yard. The Department has presented laboratory testing data (TCLP and Total) from AC grindings that demonstrate levels of TPH-residual fuels (motor oil) consistently around 5000-9000 mg/kg, which surpass soil ESLs for TPH. Based upon information made available by the Department and our experience with AC & PCC grinding materials, Water Board staff can provide the following guidance:

1) The reuse of AC & PCC as road base is acceptable without any testing whatsoever. This is predicated on the assumption that the material will be encapsulated under an asphalt/concrete roadway, which is relatively impervious to infiltration that could tend to cause percolation and/or migration of contaminants to groundwater or other receptors in excess of numerical water quality limits. Additionally, AC & PCC materials must be placed at least five feet above the seasonal high groundwater elevation. This is consistent with prior Water Board decisions over the years regarding these materials;

2) Potential reuse of AC or PCC grindings as yard cover at the surface of contractor work yards, or in embankments where the material is exposed at the surface, shall be reviewed on a case-by case basis. The primary concern with these reuse options is that contaminants (TPH, pH, metals) may enter storm water runoff and threaten surface water

bodies. On a project-by-project basis, the Department may do some leach testing that mimics storm water running over the material and see what it produces. Alternatively, the Department may impound, test, and treat storm water from the project area, if necessary; and,

3) In the 12/27 meeting, you indicated a desire to submit a single management plan for unrestricted reuse of AC & PCC materials and that the Department would like ultimate Water Board approval. Alec Naugle had mentioned at the meeting that necessary data to support such a plan should include results of material leaching tests using deionized water as the extractant. Since this meeting, Water Board staff has decided that the synthetic precipitation leaching procedure (SPLP) may be a more appropriate test. What is needed is demonstration that the materials either don't leach in excess of ESLs and/or water quality limits (i.e, the material is inert), or if they do leach in excess of the limits, that there are mitigating circumstances such as adequate storm water BMPs, appropriate placement, etc, to ensure there won't be any excessive water quality impacts. Another approach/goal is to provide enough data to demonstrate that the materials across a broad range of scenarios will only leach a specific level of pollutants and may be managed using some standard mitigation measures. The Water Board does not currently have enough data in hand to give its approval on unresticted reuse of AC & PCC, so non-road base reuse scenarios will be case-by-case for some time to come.

Pursuant to California Water Code 13260 and California Code of Regulations Title 27, which regulates land disposal activities, the Water Board may require proof that placing waste (which may include discarded product or recycled materials) will not result in degradation of water quality. Degradation of water quality can be defined in terms of beneficial uses and/or in terms of numerical limits adopted to protect those uses. The ESLs are based on such numerical limits and therefore comparing what leaches out this material to an ESL is a good starting point for determining if the material is inert or presents a threat to beneficial uses.

If you have any questions, or comments, please contact Brendan Thompson of my staff at (510) 622-2506, or via e-mail to BThompson@waterboards.ca.gov.

Sincerely,

for Bruce H. Wolfe
Executive Officer

cc: Dave Yam, Caltrans
Hardeep Takhar, Caltrans